Complaint Investigation Report:

Domestic Water Concerns with Harvesting and Road Construction near Elmer Creek

Complaint: 060740

Forest Practices Board

FPB/IRC/123
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Introduction

During 2006, the Board completed a review of its complaint investigation program. One of the conclusions of the review was to put greater emphasis on addressing the issues of importance to participants. Consequently, at the outset of an investigation, staff talk to the participants and determine the issues at stake; the history among the parties; and decide on the approach to take with the investigation. Under the new model, depending on the nature of the complaint, published investigations will range from the traditional investigation reports, that are written with the general public as the audience, to less traditional styled reports that are written mainly for the participants, although all reports will be posted on the Board's website and available to the public. This investigation report focuses on clarifying issues facing the participants and providing information for their use.

The Complaint

On September 29 and October 3, 2006, the Board received two separate complaints. Both complaints arose from proposed timber harvesting and road construction in the Elmer Creek area, near the community of Yahk. The complainants asserted that BC Timber Sales (BCTS) had not implemented the recommendations of a hydrology assessment of the proposed forest development. They assert that the proposed road construction, improved public access and clear-cut harvesting would adversely affect domestic water supplies and other resources.

Background

In 2004, BCTS identified mountain pine beetle infestations in the King Creek area (which includes both Elmer and Elmira Creek). BCTS created a "total chance plan" identifying potential road networks and cutblocks to develop the area over time. BCTS discussed the proposed development with the participants. The proposed cutblocks and roads have undergone changes as new information on the mountain pine beetle infestation has been acquired.

As part of the consultation, BCTS retained a hydrologist to assess the area. The *King Creek Face Hydrologic Assessment* (King Creek hydrology report) was completed in July 2005. It assessed possible hydrologic impacts in the Elmer, Elmira and King Creek watersheds that may result from timber harvesting and road construction, and recommended measures to protect domestic water supplies. The assessment used the preliminary forest development plan as it was at the time. That plan has since been changed, with two amendments to facilitate the changes in the initial location and size of the blocks and roads.

In designing road locations, BCTS had an engineering firm prepare a terrain stability assessment (TSA) on the road system. That assessment was completed in September 2006. It examined the final proposed location of the Elmer Creek FSR Mainline, the Lower Elmira Mainline and the Lower Elmira 200 road. The TSA identified landslide hazards and risks and made recommendations to manage these risks and hazards.

Subsequently, BCTS awarded a contract for road construction and construction began in mid-November 2006.

Discussion

The complainants assert that proposed road construction, improved public access and clear-cut harvesting would negatively affect domestic water supplies. The investigation examined:

1. What are the complainant's concerns;
2. What has been the approach of BCTS; and
3. What outstanding issues remain concerning domestic water.

1. What are the complainant's concerns?

In the complainants' view, doubling of the proposed cutblock size and the addition of the Lower Elmira 2000 road contradict the recommendations of the July 2005 hydrologic assessment. As well, because the Lower Elmira 2000 Road adds two switchbacks (effectively, 3 additional road lengths) in the catchment area for their water, the complainants believe the roads will interrupt subsurface flow. Thus, if the roads are built, they maintain that the roads must subsequently be re-contoured and rehabilitated to the natural slope.

The participants were reluctantly satisfied with the planned Lower Elmira 2000 road, assuming that the road would be temporary and would be re-contoured after harvesting. This belief was based on the 2005 King Creek hydrology report recommendations. However, the TSA proposed, and BCTS proceeded with plans to establish, the Lower Elmira 2000 road as a permanent road. As such, it would be subject to only semi-permanent deactivation. That meant the road would have water bars and other long-term erosion measures applied, but it would not be re-contoured because it would be re-opened to allow for future harvesting.

The complainants also contend that BCTS should not be harvesting the pine accessed by the Lower Elmira 2000 road. The road accesses fir and cedar stands which BCTS has withdrawn from the current harvesting plan. However, BCTS intends to harvest those fir and cedar stands in future. The complainants maintain that the low volume of pine does not justify the expense of building the Lower Elmira 2000 Road. When that issue is added to the concerns with water quality, the complainants maintain that risk to water supplies is unwarranted.

2. What has been the approach of BCTS?

BCTS' response has been that it will continue to consider the recommendations and information in the King Creek hydrology report during forest harvesting and road construction. For example, in response to the King Creek hydrology report and further on-

site reconnaissance, 400 meters of proposed road construction was withdrawn.

BCTS emphasizes it is constructing a permanent road that is built to a very high standard, with drainage control structures to manage water over the long term. In contrast, temporary roads are built quickly and often to a lower standard. Temporary roads bring higher short term risks, and offer fewer opportunities for BCTS to control construction and any associated environmental impacts.

Lastly, the King Creek hydrology report recommends managing disruptions to sub-surface flows, which are the potential sources for the down-slope spring-fed water supply. Significantly, the report recommended:

> As a final recommendation, it is recommended that BCTS establish effective planning and operational procedures including adequate supervision of on-site activities to ensure the intent of the recommendations in this report is met during operations.

BCTS has engaged the TSA engineering firm to provide further engineering and hydrologic expertise while road construction and harvesting planning is undertaken. This will ensure that planning and on-site expertise is available. The engineering firm will review road construction in progress and adjust the prescriptions and operations to deal with on-site conditions, such as subsurface water flows, if and when they are encountered.

3. What outstanding issues remain concerning domestic water?

The complainants assert that the proposed road construction is not consistent with the King Creek hydrology assessment. To clarify this issue, the Board commissioned the hydrologist who authored the King Creek hydrological report to examine the terrain stability assessment for consistency. That was done on November 29, 2006, and all the participants were provided with this report (November 2006 hydrologist report) for their consideration.

The November 2006 hydrologist report provided some suggestions that may increase confidence that the harvesting and road construction will deal with risks to domestic water sources. The hydrologist suggested that potential risks to domestic water be reflected in all planning documents for the road and cutblock developments.

In summary, the November 2006 hydrologist report suggested that BCTS:

- Indicate, in planning documents, all water features such as wetlands, streams, springs and other water intakes.
- Document sections of road alignments that could potentially affect surface and subsurface water flows in the spring recharge areas, to ensure road construction takes these areas into account.

- Indicate, in planning documents, that it will consider deactivation of roads only if subsurface flows are encountered. Alternative methods to deactivation, as determined by a qualified professional, can also be considered to reduce potential risk to water supplies.

BCTS responded to the hydrology report, and shared that response with the complainants, to clarify its plans to date and offer more context for consideration of water issues. BCTS outlined current and future measures to address issues raised in the November 2006 hydrology report. BCTS promised to:

- not construct the last 400 meters of the planned "Lower Elmira 2000" Spur;
- supplement the drainage assessment work already undertaken by the on-site engineer during his TSA, by conducting further study of the drainage upslope of points of water diversion, as required to assess BCTS development against drainage patterns in the area; and
- Build the "Lower Elmira 2000" spur road during snow-free conditions to ensure a clear assessment of the drainage during construction.

In addition to this, the Board notes the TSA engineering firm has discussed both the King Creek Hydrology report and the TSA report with the hydrologist as he prepared the November 2006 hydrology report. The engineering firm has examined the road system extensively in recent months (December 12, 2006) and found no sign of seepage on the pilot trail in the areas of concern to the complainants. The engineering firm also discussed the site with the road construction contractor who encountered no seepage. BCTS and the on-site engineering firm are prepared to develop appropriate site-specific prescriptions to address any water issues that arise as the construction continues.

Concluding Remarks

In conclusion, the complainants have substantial concerns with the potential for harvesting and road construction to disrupt the subsurface water flows supplying their domestic water. The Forest Practices Board commissioned its own hydrologist report to provide the participants with information and to clarify issues. This report offered some suggestions to increase confidence that the harvesting and road construction will deal with risks to domestic water sources. In response, BCTS has undertaken several measures to clarify its approach and measures being taken to address domestic water concerns. The Board considers that all participants have a better understanding of the issues.

BCTS has committed to continue monitoring the harvesting and road building operations, and uphold its commitment to consider and address the issues identified in all of the reports and the advice of all the professionals.